



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

GARG *et al.*

Appl. No.: 10/060,086

Filed: January 31, 2002

For: **RISC Microprocessor Architecture
Implementing Multiple Typed
Register Sets**

Confirmation No.: 6414

Art Unit: 2154

Examiner: Larry D. Donaghue

Atty. Docket: 2047.0600007

Second Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

03/27/2006 HALI11 00000018 10060086
01 FC:1806 180.00 DP

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☐ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☒ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
- ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than

three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

☒ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$180.00 in payment of the fee under 37 C.F.R. § 1.17(p).

☐ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$_____ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than

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- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

- ☒ 5. Documents **FP1-FP8** were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report, **NPL12**, that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

Documents **FP1**, **FP2**, **FP5** and **FP7** were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report, **NPL13**, that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

Documents **FP1**, **FP5**, and **FP9-FP11** were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report, **NPL14**, that indicates the degree of

relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.

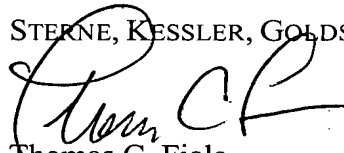
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).
- ☒ 7. Copies of documents **FP1-FP11** and **NPL1-NPL14** are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.
- ☒ 8. Copies of documents **FP12-FP16** and **NPL15-NPL70** were previously submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in the present Application on December 3, 2002. Thus, copies of these documents are not attached.
- ☒ 9. It is expected that the examiner will review the prosecution and cited art in the parent application no(s). 09/840,026 in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Tom CF", is written over the printed name of Thomas C. Fiala.

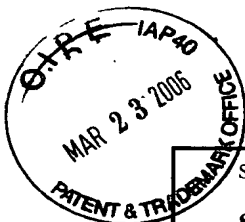
Thomas C. Fiala
Attorney for Applicants
Registration No. 43,610

Date:

3/23/06

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Washington, D.C. 20005-3934
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|---|---|----|---|--------------------------|-------------------|
| SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary) | | | | Complete if Known | |
| | | | | Application Number | 10/060,086 |
| | | | | Filing Date | January 31, 2002 |
| | | | | First Named Inventor | Sanjiv GARG |
| | | | | Art Unit | 2154 |
| | | | | Examiner Name | Larry D. Donaghue |
| Sheet | 1 | of | 9 | Attorney Docket Number | 2047.0600007 |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number-Kind Code ² (if known) | | | |
| | US1 | 5,125,092 | 06/23/1992 | Prener | |
| | US2 | 5,214,786 | 05/25/1993 | Watanabe et al. | |
| | US3 | 5,133,077 | 07/21/1992 | Karne et al. | |
| | US4 | 5,093,783 | 03/03/1992 | Kitada | |
| | US5 | 07/259,345 | 10/18/1988 | Barbour | |
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| | US12 | 5,125,092 | 06/1992 | Prener | |
| | US13 | 5,201,056 | 04/1993 | Daniel et al. | |
| | US14 | 5,226,126 | 07/1993 | McFarland et al. | |
| | US15 | 5,230,068 | 07/1993 | Van Dyke et al. | |
| | US16 | 5,241,636 | 08/1993 | Kohn | |
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| | US18 | 5,487,156 | 01/1996 | Popescu et al. | |
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| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|--------------------------|---|--------------------------------|--|---|--------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear | T 6 |
| | | Country Code ³ Number ⁴ Kind Code ⁵ (if known) | | | | |
| | FP1 | JP 2-226342 | 09/07/1990 | | | |
| | FP2 | JP-A-62-242243 | 10/22/1987 | | | |
| | FP3 | JP-A-1-142831 | 06/05/1989 | | | |
| | FP4 | JP-A-1-199233 | 08/10/1989 | | | |
| | FP5 | JP-A-60-144830 | 07/31/1986 | | | |
| | FP6 | JP-A-61-40650 | 02/26/1986 | | | |
| | FP7 | JP-A-2-118757 | 05/07/1990 | | | |
| | FP8 | JP-A-2-224025 | 09/06/1990 | | | |
| | FP9 | JP 2-211534 | 08/22/1990 | | | |
| | FP10 | JP 57-57345 | 04/06/1982 | | | |
| | FP11 | JP-3-35324 | 02/15/1991 | | | |

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| Examiner Signature | | Date Considered | |
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| Substitute for form 1449/PTO SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i> | | | | Complete if Known | |
| | | | | Application Number | 10/060,086 |
| | | | | Filing Date | January 31, 2002 |
| | | | | First Named Inventor | Sanjiv GARG |
| | | | | Art Unit | 2154 |
| | | | | Examiner Name | Larry D. Donaghue |
| Sheet | 2 | of | 9 | Attorney Docket Number | 2047.0600007 |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
| | | Number-Kind Code ² (if known) | | | |
| | US21 | 5,561,776 | 10/1996 | Popescu <i>et al.</i> | |
| | US22 | 5,592,636 | 01/1997 | Popescu <i>et al.</i> | |
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| | US25 | 5,682,546 | 10/1997 | Garg <i>et al.</i> | |
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| | US27 | 5,768,575 | 06/1998 | McFarland <i>et al.</i> | |
| | US28 | 5,797,025 | 08/1998 | Popescu <i>et al.</i> | |
| | US29 | 5,832,293 | 11/1998 | Popescu <i>et al.</i> | |
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| | US31 | 6,044,449 | 03/2000 | Garg <i>et al.</i> | |
| | US32 | 6,249,856 B1 | 06/2001 | Garg <i>et al.</i> | |
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| | | Country Code ³ Number ⁴ Kind Code ⁵ (if known) | | | | |
| | FP12 | EP 0 170 284 A2 | 02/1986 | | | |
| | FP13 | EP 0 213 843 A2&A3 | 03/1987 | | | |
| | FP14 | EP 0 241 909 A2 | 10/1987 | | | |
| | FP15 | EP 0 454 636 A1 | 10/1991 | | | |
| | FP16 | GB 2 190 521 A | 11/1987 | | | |
| | FP17 | | | | | |
| | FP18 | | | | | |
| | FP19 | | | | | |
| | FP20 | | | | | |
| | FP21 | | | | | |

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| Examiner Signature | | Date Considered | |
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| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|--|----------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published | T ² |
| | NPL1 | Patent Abstracts of Japan, Publication No. 02-226342, English Language Abstract for JP Patent Application No. 02-001127, (1 page). | |
| | NPL2 | Patent Abstracts of Japan, Publication No. 62-242243, English Language Abstract for JP Patent Application No. 61-085442, (2 pages). | |
| | NPL3 | English Language Abstract for JP Patent Publication No. 1-142831, (1 page). | |
| | NPL4 | English Language Abstract for JP Patent Publication No. No. 1-199233. | |
| | NPL5 | Patent Abstracts of Japan, Publication No. 60-144830, English Language Abstract for JP Patent Application No. 59-000424, (2 pages). | |
| | NPL6 | Patent Abstracts of Japan, Publication No. 61-40650, English Language Abstract for JP Patent Application No. 59-163061, (1 page). | |
| | NPL7 | Patent Abstracts of Japan, Publication No. 2-118757, English Language Abstract for JP Patent Application No. 63-271010, (2 pages). | |
| | NPL8 | Patent Abstracts of Japan, Publication No. 2-224025, English Language Abstract for JP Patent Application No. 01-270136, (1 page). | |
| | NPL9 | Patent Abstracts of Japan, Publication No. 02-211534, English Language Abstract for JP Patent Application No. 01-031652, (2 pages). | |
| | NPL10 | Patent Abstracts of Japan, Publication No. 57-057345, English Language Abstract for JP Patent Application No. 55-132633, (2 pages). | |

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| | | | | Art Unit | 2154 |
| | | | | Examiner Name | Larry D. Donaghue |
| Sheet | 4 | of | 9 | Attorney Docket Number | 2047.0600007 |

| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published | T ² |
| | NPL11 | English Language Abstract for JP Patent Publication No. 3-35324, (1 page). | |
| | NPL12 | Japanese language copy of the Notice of Rejection and the English language translation, issued by the Japanese Patent Office in Appl. No. 5-502403, dated July 22, 2003 (10 pages). | |
| | NPL13 | Japanese language copy of the Notice of Rejection and the English language translation, issued by the Japanese Patent Office in Appl. No. 5-502403, dated March 2, 2004 (9 pages). | |
| | NPL14 | Japanese language copy of the Notice of Rejection and the English language translation, issued by the Japanese Patent Office in Appl. No. 2004-010369, dated June 1, 2005 (9 pages). | |
| | NPL15 | Acosta, R. D. <i>et al.</i> , "An Instruction Issuing Approach to Enhancing Performance in Multiple Functional Unit Processors," <i>IEEE Transactions On Computers</i> , IEEE, Vol. C-35, No. 9, September 1986, pp. 815-828. | |
| | NPL16 | Adams, R.G. <i>et al.</i> , "Utilising low level parallelism in general purpose code: the HARP project," <i>Microprocessing and Microprogramming</i> , Elsevier Science Publishers, B.V., Vol. 29, No. 3, October 1990, pp. 137-149. | |
| | NPL17 | Agerwala, T. and Cocke, J., A High Performance Reduced Instruction Set Processors, IBM Research Division, March 31, 1987, pp. 1-61. | |
| | NPL18 | Aiken, A. and Nicolau, A., "Perfect Pipelining: A New Loop Parallelization Technique*," <i>ESOP '88, 2nd European Symposium on Programming</i> , Springer, ISBN 3-540-19027-9, 1988, pp. 221-235. | |
| | NPL19 | Albert, A.J., "User Configurable Local Storage Registers," <i>IBM Technical Disclosure Bulletin</i> , IBM, Vol. 18, No. 12, May 1976, pp. 3971-3975. | |
| | NPL20 | Birman, M. <i>et al.</i> , "Design of a High-Speed Arithmetic Datapath," <i>Proceedings 1988 IEEE International Conference on Computer Design: VLSI in Computers & Processors</i> , IEEE, October 3-5, 1988, pp. 214-216. | |

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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| | | | | Filing Date | January 31, 2002 |
| | | | | First Named Inventor | Sanjiv GARG |
| | | | | Art Unit | 2154 |
| | | | | Examiner Name | Larry D. Donaghue |
| Sheet | 6 | of | 9 | Attorney Docket Number | 2047.0600007 |

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